AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended) A method for coding a motion vector comprising the steps of:

computing two-dimensional prediction error information by using a motion vector to be coded and the n (n≥1) number of neighboring motion vectors;

selecting prediction error information having the minimum bitrate from the computed prediction error information, wherein the prediction error information of minimum bitrate includes prediction error information of minimum bitrate applied to the factor 'X' and prediction error information of minimum bitrate applied to the factor 'Y';

obtaining mode information indicative of a neighboring motion vector which has occurred the prediction error information of the minimum bitrate; and

coding the obtained prediction error information of the minimum bitrate and the mode information.

2.   (Original) The method of claim 1, wherein the prediction error information of a minimum bitrate is commonly applied to factors 'X' and 'Y'.

3. (Canceled)

4. (Currently Amended) The method of claim [[3]]1, wherein the prediction error information of minimum bitrate of the factor 'X' and the factor 'Y' are sequentially linked.

5. (Original) The method of claim 1, wherein the mode information is commonly applied to the factors 'X' and 'Y'.

6. (Currently Amended) ~~The method of claim 1~~ A method for coding a motion vector comprising the steps of:

computing two-dimensional prediction error information by using a motion vector to be coded and the n ($n \geq 1$) number of neighboring motion vectors;

selecting prediction error information having the minimum bitrate from the computed prediction error information;

obtaining mode information indicative of a neighboring motion vector which has occurred the prediction error information of the minimum bitrate, wherein the mode information includes mode information of the factor 'X' and mode information of the factor 'Y'; and

coding the obtained prediction error information of the minimum bitrate and the mode information.

3

7.   (Currently Amended) ~~The method of claim 1~~ A method for coding a motion vector comprising the steps of:

computing two-dimensional prediction error information by using a motion vector to be coded and the n (n≥1) number of neighboring motion vectors;

selecting prediction error information having the minimum bitrate from the computed prediction error information;

obtaining mode information indicative of a neighboring motion vector which has occurred the prediction error information of the minimum bitrate, wherein the mode information of the factor 'X' and the factor 'Y' are sequentially linked; and

coding the obtained prediction error information of the minimum bitrate and the mode information.

8.   (Original)   The method of claim 1, wherein the step of obtaining mode information comprises:

defining 'n' number of candidate motion vectors by using the prediction error information of minimum bitrate and 'n(n≥1)' number of neighboring motion vectors;

selecting an actually effective candidate motion vector from the defined candidate motion vectors; and

assigning code information indicative of a candidate motion vector actually used for predicting the minimum bitrate among the selected candidate motion vectors.

4

9.   (Original) The method of claim 8, wherein the code information is not assigned if there is one effective motion vector when 'n' is 3 and 1 bit code is assigned if there are two effective motion vectors.

10.   (Original) The method of claim 9, wherein the code information is assigned in such a manner that, if there are three effective motion vectors, 1 bit code is assigned to one candidate motion vector and 2 bit code is assigned to the other two candidate motion vectors.

11.   (Original) A method for coding a motion vector comprising the steps of:

computing prediction error information between a motion vector to be coded and the n ($n \geq 1$) number of neighboring motion vectors;

selecting prediction error information of the minimum bitrate from the computed prediction error information;

checking whether factors of 'X' and 'Y' of the obtained prediction error information of the minimum bitrate are '0' and coding the prediction error information of the minimum bitrate; and

coding mode information indicative of a neighboring motion vector which has generated the prediction error information of the minimum bitrate.

12.   (Previously Presented) The method of claim 11, wherein the prediction error information of minimum bitrate is one-dimensional or two-dimensional.

13.   (Original) The method of claim 11, wherein the prediction error information of minimum bitrate is coded to 1 bit information when a factor 'X' and a factor 'Y' are both '0'.

14.   (Previously Presented) The method of claim 11, wherein the prediction error information of minimum bitrate is coded to 2 bit header information and corresponding prediction error information of minimum bitrate when the factors 'X' and 'Y' are not both '0'.

15.   (Previously Presented) The method of claim 11, wherein the prediction error information of minimum bitrate is coded to 3 bit header information and prediction error information of minimum bitrate other than '0' when one of the factors 'X' and 'Y' is not '0'.

16.   (Original) The method of claim 15, wherein the 3 bit header information indicates prediction error information of minimum bitrate of '0'.

17.   (Original) The method of claim 11, wherein the prediction error information of minimum bitrate and the mode information are prediction error information of minimum bitrate commonly applied to the factors 'X' and 'Y'.

18.   (Original) The method of claim 11, wherein the prediction error information of

minimum bitrate includes prediction error information of minimum bitrate applied to the factor

'X' and prediction error information of minimum bitrate applied to the factor 'Y'.

19.   (Original) The method of claim 18, wherein the prediction error information of

minimum bitrate of the factor 'X' and the factor 'Y' are sequentially linked.

20.   (Original) The method of claim 11, wherein the step of obtaining mode

information comprises:

        defining 'n' number of candidate motion vectors by using the prediction error

information of minimum bitrate and 'n(n≥1)' number of neighboring motion vectors;

        selecting an actually effective candidate motion vector from the defined candidate

motion vectors; and

        assigning code information indicative of a candidate motion vector actually used

for predicting the minimum bitrate among the selected candidate motion vectors.

21.   (Currently Amended) A method comprising:

        computing two-dimensional prediction error information based on a motion

vector and neighboring motion vectors;

7

selecting prediction error information from the computed two-dimensional prediction error information, wherein the selected prediction error information of the minimum bitrate includes prediction error information of minimum bitrate applied to an 'X' factor and prediction error information of minimum bitrate applied to a 'Y' factor;

obtaining mode information indicative of a neighboring motion vector used with the selected prediction error information; and

coding the selected prediction error information and the obtained mode information.

22.   (Currently Amended)   The method of claim [[21]]24, wherein the selected prediction error information comprises computed two-dimensional prediction error information having a minimum bitrate from among the computed two-dimensional prediction error information.

23.   (Canceled)

24.   (Currently Amended)   ~~The method of claim 21~~ A method comprising:

computing two-dimensional prediction error information based on a motion vector and neighboring motion vectors;

selecting prediction error information from the computed two-dimensional prediction error information;

obtaining mode information indicative of a neighboring motion vector used with the selected prediction error information, wherein the mode information includes mode information of an 'X' factor and mode information of a 'Y' factor; and

coding the selected prediction error information and the obtained mode information.

25.   (Previously Presented)   The method of claim 21, wherein obtaining mode information comprises:

defining a number of candidate motion vectors based on the selected prediction error information and the number of neighboring motion vectors; and

selecting an effective candidate motion vector from the defined candidate motion vectors.

26.   (Previously Presented)   The method of claim 25, wherein obtaining the mode information further comprises:

assigning code information indicative of a candidate motion vector used for predicting a minimum bitrate among the selected effective candidate motion vectors.

27.   (Previously Presented) A method comprising:

computing prediction error information between a motion vector and neighboring motion vectors;

selecting prediction error information from the computed prediction error information;

checking whether an 'X' factor and a 'Y' factor of the selected prediction error information are '0' and coding the selected prediction error information based on the checking; and

coding mode information indicative of a neighboring motion vector used with the selected prediction error information.

28.   (Previously Presented) The method of claim 27, wherein the selected prediction error information comprises prediction error information having a minimum bitrate from among the computed prediction error information.

29.   (Previously Presented) The method of claim 27, wherein the prediction error information is coded to 1 bit information when the 'X' factor and the 'Y' factor are both '0'.

30.   (Previously Presented) The method of claim 27, wherein the prediction error information is coded to 2 bit header information when the 'X' factor and the 'Y' factor are not both '0'.

31.   (Previously Presented) The method of claim 27, wherein the prediction error

information is coded to 3 bit header information and prediction error information of minimum

bitrate other than '0' when one of the 'X' factor and 'the Y' factor is not '0'.

32.   (Previously Presented)   The method of claim 21, wherein coding mode

information comprises:

defining a number of candidate motion vectors based on the selected prediction

error information and the number of neighboring motion vectors; and

selecting an effective candidate motion vector from the defined candidate motion

vectors.

33.   (Previously Presented)   The method of claim 31, wherein coding the mode

information further comprises:

assigning code information indicative of a candidate motion vector used for

predicting a minimum bitrate among the selected effective candidate motion vectors.